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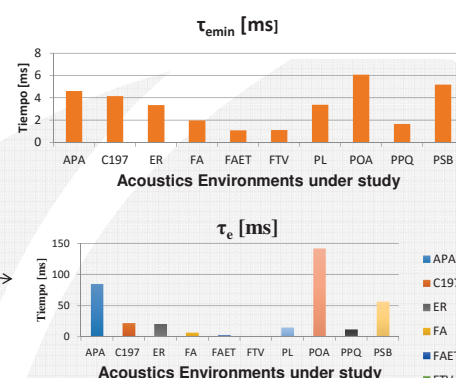
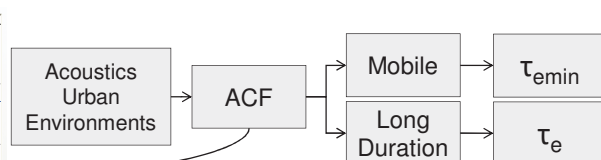
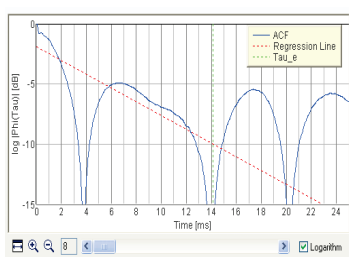
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Abstract

Currently we are working on methodologies to characterize, evaluate and optimize acoustic environments with different approaches. One methodology is based on the evaluation of temporal energetic behavior of acoustic environment through the use of parameters associated with the autocorrelation function (ACF). In this case the main objective is to verify the variability of the temporal behavior of urban acoustic environment depending of sounds sources that are part of them. We evaluate the temporal energetic behavior in 10 urban acoustic environments using ACF in two main cities, Brasilia (Brazil) and Bogotá (Colombia).

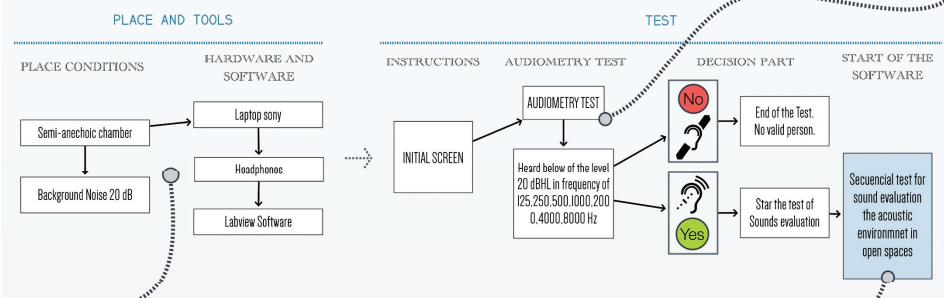
The second methodology is based on the design of an experiment to improve and optimize acoustic environments on the basis of the auditory subjective experiences of the people. It has been designed a LabVIEW application for psychoacoustic laboratory tests to evaluate the subjective perception of people. The main objective is to evaluate how adding sound signals in acoustics environments with traffic noise could improve the experience of the users.

Sound quality: Assessment of time-domain



Subjective design of sound quality in open spaces

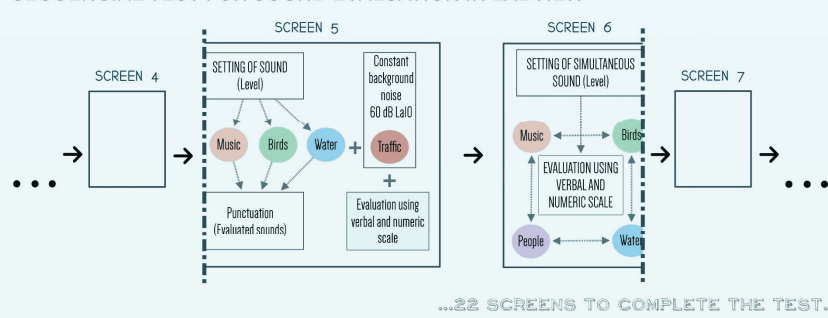
METHODOLOGY



TOOLS (HARDWARE AND SOFTWARE)



SECUENCIAL TEST FOR SOUND EVALUATION IN LABVIEW



Papers in journals & congress

- L.F. Hermida & I. Pavón. Paisajes Sonoros: Camino a la Estandarización. Análisis de Norma ISO 12913-1 Acoustics. Soundscape. Part 1. Definition and conceptual framework. IX Congreso Iberoamericano de Acústica. Valdivia (Chile). 2014.
- Asensio, C.; Recuero, M.; Pavón, I.; Citizens' perception of the efficacy of airport noise insulation programmes in Spain. Applied Acoustics (2014).
- Tabacchi, M.; Pavón, I.; Ausejo, M.; Asensio, C. Assessment of noise exposure during commuting in the Madrid Subway. Journal of Occupational & Environmental Hygiene (2011)

